

=> d his full

```
(FILE 'USPAT' ENTERED AT 14:37:57 ON 03 SEP 1997)
L1      54 SEA 395/187.01/CCLS
L2      295 SEA 395/186,200.55,200.59/CCLS
L3      1465 SEA 340/825.31,825.34/CCLS
L4      177 SEA 395/726/CCLS
L5      49 SEA 395/188.01/CCLS
L6      1964 SEA (L1 OR L2 OR L3 OR L4 OR L5)
L7      7 SEA PROXY AGENT#
L8      979 SEA FIREWALL
L9      77 SEA (FIREWALL/AB)
L10     232 SEA PROXY
L11     1 SEA L10 AND L9
L12     19439 SEA PACKET#
L13     4 SEA L9 AND L12
L14     3023 SEA PASSWORD#
L15     3 SEA L8 AND L9 AND L14
L16     1252 SEA BEEPER
L17     2 SEA L8 AND L16
L18     4545 SEA RANDOM NUMBER#
L19     180 SEA TRANSACTION LOG?
L20     139 SEA DAEMON#
L21     0 SEA CHANGERROOT
L22     24 SEA UNIX (10A) ROOT
L23     0 SEA L8 AND L22
L24     1 SEA L8 AND L20
L25     0 SEA L8 AND L19
L26     7 SEA L8 AND L18
L27     52 SEA PACKET FILTER?
L28     1 SEA L8 AND L27
L29     955 SEA 380/3,4,48/CCLS
L30     2 SEA L8 AND L29
```

FILE USPAT

```
* * * * *
*           W E L C O M E   T O   T H E           *
*           U . S .   P A T E N T   T E X T   F I L E           *
* * * * *
```

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#2 proxy agent

3

#3 #1 and #2

0

#4 proxy

41

#5 #1 and #4

2

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 - ☒ 1988 - 1993 Collection

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firewall and proxy agent

☐ Nice ☐ Query By Example

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proxy server

Last modified: June 16, 1997

A server that sits between a client application, such as a Web browser, and a real server. It intercepts all requests to the real server to see if it can fulfill the requests itself. If not, it forwards the request to the real server.

Proxy servers have two main purposes:

- **Improve Performance:** Proxy servers can dramatically improve performance for groups of users. This is because it saves the results of all requests for a certain amount of time. Consider the case where both user X and user Y access the World Wide Web through a proxy server. First user X requests a certain Web page, which we'll call Page 1. Sometime later, user Y requests the same page. Instead of forwarding the request to the Web server where Page 1 resides, which can be a time-consuming operation, the proxy server simply returns the Page 1 that it already fetched for user X. Since the proxy server is often on the same network as the user, this is a much faster operation. Real proxy servers support hundreds or thousands of users. The major online services such as Compuserve and America Online, for example, employ an array of proxy servers.
- **Filter Requests:** Proxy servers can also be used to filter requests. For example, a company might use a proxy server to prevent its employees from accessing a specific set of Web sites.

SEE ALSO:

[firewall
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firewall

Last modified: May 29, 1997

A system designed to prevent unauthorized access to or from a private network. Firewalls can be implemented in both hardware and software, or a combination of both. Firewalls are frequently used to prevent unauthorized Internet users from accessing private networks connected to the Internet, especially intranets. All messages entering or leaving the intranet pass through the firewall, which examines each message and blocks those that do not meet the specified security criteria.

There are several types of firewall techniques:

- Packet filter: Looks at each packet entering or leaving the network and accepts or rejects it based on user-defined rules. Packet filtering is fairly effective and transparent to users, but it is difficult to configure. In addition, it is susceptible to IP spoofing.
- Application gateway: Applies security mechanisms to specific applications, such as FTP and Telnet servers. This is very effective, but can impose a performance degradation.
- Circuit-level gateway: Applies security mechanisms when a TCP or UDP connection is established. Once the connection has been made, packets can flow between the hosts without further checking.
- Proxy server: Intercepts all messages entering and leaving the network. The proxy server effectively hides the true network addresses.

In practice, many firewalls use two or more of these techniques in concert.

A firewall is considered a first line of defense in protecting private

information. For greater security, data can be encrypted.

SEE ALSO:

extranet

network

intranet

proxy server

IP spoofing

security

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Firewall lab test - article ☞

Data Communications article (March 21, 1997) on the performance results of 20 firewall products. Reveals trends, product features and downfalls. Updated on Aug 27, 1997

Paper on Internet firewalls and security ☞

This paper, from 3Com, focuses on many of the issues relating to the construction of Internet firewalls, including their benefits, limitations, building blocks, and examples of firewall system topologies. Updated on Jul 13, 1997

Rotherwick firewall resources ☞

Contains over 900 firewall and Internet security links as well as introductory information on firewalls and network security. Updated on Jul 18, 1997

TechTools article on firewalls ☞

This TechTools article, from January 22, 1997, provides a good description of firewall technology including functionality, ease-of-use and hybrid systems, and links to a firewall feature table and pricing and platform information. Updated on Aug 26, 1997

Firewall documents and product resources

Provides links to firewall documents, products and a mailing list.

Firewall product overview

Contains a directory of commercial firewall products. Updated on Apr 19, 1997

Firewalls FAQ

Contains answers to basic questions about firewalls. Updated on Jun 22, 1997

Firewalls mailing list

This is the sign-up page for an Internet firewall mailing list.

Trusted Information Systems home page

Home page of Trusted Information Systems, a provider of network security products. This page provides links to a company overview, products and services, and research.

Yahoo!'s firewall companies page

Yahoo!'s directory of firewall companies. Updated on Aug 16, 1997

Yahoo!'s firewall page

Yahoo!'s directory of firewall. Updated on Aug 16, 1997

Yahoo!'s firewall utilities page

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firewalls book

smb@research.att.com

Tue, 26 Apr 94 17:42:45 EDT

- Messages sorted by: [\[date \]](#) [\[thread \]](#) [\[subject \]](#) [\[author \]](#)
- Next message: [John \[Francis\] Stracke: "WWW proxy information"](#)
- Previous message: [Kevin Altis: "Re: WWW proxy information"](#)

Since I've received a fair number of questions about the book, I'll make one (and only one) post about it, with the prior permission of our esteemed host and (quasi-)moderator. The book is

Firewalls and Internet Security: Repelling the Wily Hacker
William R. Cheswick and Steven M. Bellovin
Addison-Wesley
ISBN 0-201-63357-4
\$26.95, paperback

The book was printed yesterday (literally!); it should be in technical bookstores within a couple of weeks, and in larger general bookstores (i.e., Barnes and Noble) by the end of May. It will take somewhat longer for the book to reach non-U.S. locations. If you can't find it in your own neighborhood, you can order it directly from Addison-Wesley.

You can snarf the preface, table of contents, and cover from

research.att.com:/dist/internet_security/firewall.book/*

More stuff (i.e., an errata list) may show up there on occasion. There's a gopher and ftp server on aw.com, but they're not fully up to speed yet.

--Steve Bellovin

- Next message: John [Francis] Stracke: "WWW proxy information"
- Previous message: Kevin Altis: "Re: WWW proxy information"



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1. **CSci 229, Computer Security, Class Project Fall 95**
 Network Management and Security in Network
 Management-SNMP CSci 229, Computer Security Term Project
 Report Fall 1995 By Sanjay Kumar School of Engineering and
 Applied Science George
<http://www.cib.bau.tu-dresden.de/~dirk/snmp/>
2. **Argus Associates of Tampa, Inc.: DSP embedded system**
microprocessor design
 DSP embedded system microprocessor design.
http://www.expert-market.com/argus_tampa/
3. **NewsMonger USENET Search Agent for the Internet**
 NewsMonger: An Internet USENET search and monitoring agent.
 Automatically monitors news group submissions. Supports
 Windows 95 & NT..
<http://www.techsmith.com/products/nmonger/overview.htm>
4. **Application Note: SNMP Proxy Agent**
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 AgentTechnical BulletinSNMP Management for Larscom Network
 Access DevicesSNMP (Simple Network Management Protocol) has
 emerged
http://www.larscom.com/an_snmp.htm
5. **CoBox Terminal Server, Ethernet and Token Ring**
 ACOLA Ethernet and Token Ring TCP/IP Terminal Server,
 standalone and integratable.
<http://cobox.com/>
6. **Larscom SNMP Element Management System & Proxy Agent**
 Larscom Wordmark Logo Network Management Banner
 SNMPElement Management System & Proxy
 AgentContentsApplications and BenefitsLarscom SNMP Proxy
 AgentAlarm and Performance Rep
http://www.larscom.com/nm_snmp.htm

7. **ovforum: Re: Proxy Agent Software**

Re: Proxy Agent Software Brian Sullivan (brian@sed.stel.com)
Wed, 30 Oct 1996 10:51:46 +0000 Messages sorted by: [date]
thread][subject][author] Next message: POTTER
<http://www.ovforum.org/email/ovforum/0295.html>

8. **Subject: proxyd -- SNMP proxy agent daemons from SNMP**

Research. Keywords:

control, status; bridge, ethernet, IP, ring, star; NMS, SNMP; UNIX;
library, sourcelib. Internet Tool Catalog PROXYD NAME proxyd --
SNMP proxy agent daemons from SNMP Research.
<http://www.duth.gr/InfoBase/noc/proxyd.txt>

9. **Subject: proxyd -- SNMP proxy agent daemons from SNMP**


Research. Keywords:

control, management, status; bridge, Ethernet, IP, OSI, ring, star;
NMS, SNMP; UNIX; library, sourcelib. NAME proxyd -- SNMP
proxy agent daemons from SNMP Research. KEYWORDS control,
....
http://www.duth.gr/InfoBase/noc/proxyd_snmp_research.txt

10. **Internet How to: Using Shell Accounts**

Computer Currents Interactive web site is based on the successful
formula of the Computer Currents magazine aimed at PC and Mac
users in the late stages of the purchasing process.
<http://www.currents.net/cciu/advisor/netguide/nethowto5.html>

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Network Management and Security in Network Management-SNMP

CSci 229, Computer Security
Term Project Report
Fall 1995

By
Sanjay Kumar
School of Engineering and Applied Science
George Washington University

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Subject: proxyd -- SNMP proxy agent daemons from SNMP Research

Keywords: control, status, bridge, ethernet, IP, ring, star, NMS, SNMP, UNIX, library, sourcelib

Internet Tool Catalog

PROXYD

NAME

proxyd -- SNMP proxy agent daemons from SNMP Research

KEYWORDS

control, status, bridge, ethernet, IP, ring, star, NMS,
SNMP, UNIX, library, sourcelib

ABSTRACT

SNMP proxy agents may be used to permit the monitoring and controlling of network elements which are otherwise not addressable using the SNMP management protocol (e.g., a network bridge that implements a proprietary management protocol). Similarly, SNMP proxy agents may be used to protect SNMP agents from redundant network management agents through the use of caches. Finally, SNMP proxy agents may be used to implement elaborate MIB access policies. The proxy agent daemon listens for SNMP queries and commands from logically remote network management stations, translates and retransmits those as appropriate network management queries or cache lookups, listens for and parses the responses, translates the responses into SNMP responses, and returns those responses as SNMP messages to the network management station that originated the transaction. The proxy agent daemon also emits SNMP traps to identified trap receivers. The proxy agent daemon is architected to make the addition of additional vendor-specific variables a straight-forward task. The proxy application comes complete with source code including a powerful set of portable libraries for generating and parsing SNMP messages and a set of command line utilities.

MECHANISM

Network management variables are made available for inspection and/or alteration by means of the Simple Network Management Protocol (SNMP).

CAVEATS

None

BUGS

None known

LIMITATIONS

This application is a template for proxy application writers.

IETF NOCTools Working Group

[Page 95]

Internet Tool Catalog

PROXYD

Only a few of the many LanBridge 100 variables are supported.

HARDWARE REQUIRED

System from Sun Microsystems, Incorporated

SOFTWARE REQUIRED

Sun OS 3.5 or 4.x

AVAILABILITY

This is a commercial product available under license from

SNMP Research

P.O. Box 8593

Knoxville, TN 37996-4800

(615) 573-1434 (Voice)

(615) 573-9197 (FAX)

Attn: Dr. Jeff Case

